

DETAILED ACTION

Response to Amendment

1. This action is responsive to applicant's amendment and remarks received on 3/7/08. Claims 10-21 are currently pending.

Claim Objections

2. In response to applicant's amendment of claim 13, the previous claim objection is withdrawn.

In response to applicant's cancellation of claims 37-40, the previous claim objection is withdrawn.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claim 21** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim calls for the element "a computer-readable subject identification system for identifying a subject". The claim clearly consists of structure, "an imaging means having a bifocal lens which includes a standard lens and a close-up lens having a focal length shorter than a focal length of the standard lens". The phrase "a computer-readable" deems the claim to be indefinite since it invokes that the system is software, but the structure of the claim has physical

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hardware components that conflicts with the preamble. It is unclear whether the applicant is trying to claim a software program or an apparatus since the preamble is directed to a software program and the body of the claim towards an apparatus. Examiner notes that if the applicant decides to amend the claim by deleting the "computer-readable" element in the preamble, it would be identical to claim 17. Correction is required.

Claim Rejections - 35 USC § 101

5. In response to applicant's cancellation of claims 36, 40, the previous claim rejection has been withdrawn.

In response to applicant's amendment of claim 21, the previous claim rejection has been withdrawn.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 10, 12, 17, 19, 20, 21** rejected under 35 U.S.C. 103(a) as being unpatentable over Hanna et al (US 6,714,665 B1) with Shin (US 2004/0037452 A1), and further in view of Ike (US 2003/0108224 A1).

Regarding **claim 10**, Hanna discloses a subject identification method for identifying a subject using an imaging means which includes a standard lens and a close-up lens, the subject identification method comprising the steps of:

capturing a current standard image of the subject using the standard lens to generate current standard image data (see figure 20, numeral 2012 obtain low-res NFOV image), and capturing a current close-up image of the subject using the close-up lens to generate current close-up image data when performing identification of the subject (see figure 21, numeral 2112 obtain high-res NFOV image); and

comparing thereafter by a close-up image data comparing means the current close-up image data with the registration close-up image data stored in the registration close-up image data storing means to thereby perform identification of the subject (see figure 3, numeral 326 which is the iris classification and comparison).

Hanna does not disclose a bifocal lens; and storing images as registration image data in image data storing means.

Shin teaches storing images as registration image data in image data storing means (see paragraph [0063] where the registration module registers the captured images from the image input means 10).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Hanna reference to store and register image data as suggested by Shin, to allow verification through the comparison of the individual's biometrics.

Ike, in the same field of endeavor, discloses a bifocal lens (see fig. 3, fig. 5, paragraph [0036]; zoom lens 22b).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Hanna with Shin combination to utilize a bifocal lens as suggested by Ike, to integrate both lens for increased portability and decrease in material usage, cost, and consumption of space.

Regarding **claim 12**, Hanna discloses wherein the subject is a person or an animal (see figure 6, numeral 610 which is an image of a person); wherein the standard image is a facial image, capturing a substantially entire face of the subject (see figure 20, numeral 2012 which is a image of the face); and, wherein the close-up image is an iris image capturing an iris of the subject (see figure 21, numeral 2112 which leads to the extraction of the iris image in figure 21 numeral 2133).

Regarding **claim 17**, Hanna discloses a subject identification system for identifying a subject comprising:

- an imaging means which includes a standard lens (see figure 20, numeral 2012 obtain low-res NFOV image) and a close-up lens having a focal length shorter than a focal length of the standard lens (see figure 21, numeral 2112 obtain high-res NFOV image);

- a current close-up image obtaining means for capturing a current close-up image of the subject using the close-up lens to thereby generate current close-up image data;

- and a close-up image data comparing means for comparing the current close-up image data obtained by said current close-up image obtaining means with the registration close-up image data stored in said registration close-up image data storing means (see figure 3, numeral 326 which is the iris classification and comparison).

Hanna does not disclose a bifocal lens; a means for storing and registering image captured in advance as registration image data.

Shin teaches a means for storing and registering image captured in advance as registration image data (see paragraph [0063] where the registration module registers the captured images from the image input means 10).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Hanna reference to store and register image data as suggested by Shin, to allow verification through the comparison of the individual's biometrics.

Ike, in the same field of endeavor, discloses a bifocal lens (see fig. 3, fig. 5, paragraph [0036]; zoom lens 22b).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Hanna with Shin combination to utilize a bifocal lens as suggested by Ike, to integrate both lens for increased portability and decrease in material usage, cost, and consumption of space.

Regarding **claim 19**, Hanna further discloses wherein the subject is a person or an animal (see figure 6, numeral 610 which is an image of a person); wherein the close-up image is an iris image capturing an iris of the subject (see figure 21, numeral 2112 which leads to the extraction of the iris image in figure 21 numeral 2133); wherein a light source for illumination emitting light toward the subject when the current close-up image of the subject is captured using the close-up lens is provided (see figure 3, numeral 331 which is responsive to the lighting control process 330); and wherein the light source is configured to have a shape, pattern (see col. 13,

lines 12-29 control process 330 may switch a specified one of the light sources 124, 126, 128, 130, and 132), color, or combination thereof which is updated to be changed.

Regarding **claim 20**, Hanna further discloses wherein the subject is a person or an animal (see figure 6, numeral 610 which is an image of a person); wherein the close-up image is an iris image capturing an iris of the subject (see figure 21, numeral 2112 which leads to the extraction of the iris image in figure 21 numeral 2133); wherein a light source for illumination emitting light toward the subject when the current close-up image of the subject is captured using the close-up lens is provided (figure 3, numeral 331); and wherein the illumination by the light source has the same brightness as the brightness needed for capturing the close-up image of the subject for obtaining the registration close-up image data to be stored in said registration close-up image data storing means, and the illumination by the light source keeps a constant brightness every time the current close-up image of the subject is captured (see col. 16, lines 5-18 which has an illumination technique that allows the head and eyes of the persons being imaged to be uniformly illuminated regardless of their respective positions).

Regarding **claim 21**, Hanna discloses a computer-readable subject identification system for identifying a subject (figure 3, numeral 310) comprising:

an imaging means which includes a standard lens (see figure 20, numeral 2012 obtain low-res NFOV image) and a close-up lens having a focal length shorter than a focal length of the standard lens (see figure 21, numeral 2112 obtain high-res NFOV image);

a current standard image obtaining means for capturing a current standard image of the subject using the standard lens to thereby generate current standard image data (see figure 20, numeral 2012 obtain low-res NFOV image);

a current close-up image obtaining means for capturing a current close-up image of the subject using the close-up lens to thereby generate current close-up image data (see figure 21, numeral 2112 obtain high-res NFOV image); and

a close-up image data comparing means for comparing the current close-up image data obtained by said current close-up image obtaining means with the registration close-up image data stored in said registration close-up image data storing means (see figure 3, numeral 326 which is the iris classification and comparison).

Hanna does not disclose a bifocal lens; and a storing means for storing and registering images captured in advance as registration image data.

Shin teaches a means for storing and registering image captured in advance as registration image data (see paragraph [0063] where the registration module registers the captured images from the image input means 10).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Hanna reference to store and register image data as suggested by Shin, to allow verification through the comparison of the individual's biometrics.

Ike, in the same field of endeavor, discloses a bifocal lens (see fig. 3, fig. 5, paragraph [0036]; zoom lens 22b).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Hanna with Shin combination to utilize a bifocal lens as suggested by Ike, to integrate both lens for increased portability and decrease in material usage, cost, and consumption of space.

8. **Claim 11** is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hanna et al (US 6,714,665 B1), Shin (US 2004/0037452 A1), with Ike (US 2003/0108224 A1) as applied to claim 10 above, and further in view of Langley (US 6,970,582 B2).

Regarding **claim 11**, Hanna, Shin, with Ike combination discloses all elements as mentioned above in claim 10. Hanna, Shin, with Ike does not disclose comparing a standard image data comparing means the current standard image data with the registration standard image data stored in the registration standard image data storing means, along with said comparing step by the close-up image data comparing means, to thereby perform identification of the subject.

Langley teaches comparing multiple biometric features (see col. 2, lines 17-33 verification by using multiple scanned biometric features by comparing the biometric data with reference biometric data recorded from the user during an enrollment procedure, to verify the identity of the user). The concept of utilizing and comparing multiple biometric features is equivalent to comparing the current standard image data along with the close-up with the respective registration image data.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Hanna, Shin, with Ike combination to utilize and compare multiple biometric features as suggested by Langley, to “[obtain] increased accuracy” (col. 2, lines 17-33) and reliability of the overall system.

9. **Claim 13** is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hanna et al (US 6,714,665 B1), Shin (US 2004/0037452 A1), with Ike (US 2003/0108224 A1) as applied to claim 10 above, and further in view of Tumey et al (US 6,963,659 B2).

Regarding **claim 13**, Hanna, Shin, with Ike combination discloses all elements as mentioned above in claim 12. Hanna further teaches wherein the subject is a person or an animal (see figure 6, numeral 610 which is an image of a person); wherein the standard image is a hand or foot image capturing a substantially entire hand or foot of the subject (see figure 6, numeral 610). Hanna, Shin, with Ike combination does not disclose a close-up image as a fingerprint image capturing a fingerprint of the subject.

Tumey teaches a close-up image as a fingerprint image capturing a fingerprint of the subject (see figure 1, numeral 120 which is taken by the camera of numeral 112).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Hanna, Shin, with Ike combination to utilize a fingerprint image as suggested by Tumey, in order to “[layer] multiple biometric techniques for providing increased levels of security” (col. 1, lines 15-26) which is well known in the art.

10. **Claims 14, 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hanna et al (US 6,714,665 B1), Shin (US 2004/0037452 A1), with Ike (US 2003/0108224 A1) as applied to claim 12 above, and further in view of Moulton (US 4,468,807).

Regarding **claim 14**, Hanna, Shin, with Ike combination discloses all elements as mentioned above in claim 12. Hanna further discloses an optical source noise (see figure 3, numeral 331), which is formed by reflecting a light source for illumination used when capturing an image; a same light source as the light source for illumination is used (see col. 6, lines 43-59; adjusts the operation of the imager so that a uniform brightness level may be established); and comparing step is performed by the close-up image data comparing means, the current close-up image data including the optical source noise is compared with the registration close-up image

data including the optical source noise (see figure 3, numeral 326 which is the iris classification and comparison). Hanna, Shin, with Ike combination does not disclose combining optical source noise with a storing means.

Moulton teaches combining optical source noise with a storing means (abstract; light levels of an image are stored in a picture memory device).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Hanna, Shin, with Ike combination to combine optical source noise with a storing means as suggested by Moulton, in order ensure uniformity and reliability of the images that are used in verifying users in the biometric system.

Regarding **claim 15**, Hanna further discloses wherein, when the current close-up image of the subject is captured using the close-up lens, a shape, pattern, color, or combination thereof of the light source is updated to be changed (see col. 13, lines 12-29 control process 330 may switch a specified one of the light sources 124, 126, 128, 130, and 132); and wherein, when the comparing step is performed by the close-up image data comparing means, a shape, pattern, color, or combination thereof of the optical source noise of the registration close-up image data used in the comparing step is changed according to the change in a shape, pattern, color, or combination thereof of the light source (see col. 6, lines 43-59; adjusts the operation of the imager so that a uniform brightness level may be established which would adjust the optical source noise of the registration close-up image data).

11. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hanna et al (US 6,714,665 B1), Shin (US 2004/0037452 A1), Ike (US 2003/0108224 A1),

with Moulton (US 4,468,807) as applied to claim 15 above, and further in view of Aucsmith et al (US 5,933,502).

Regarding **claim 16**, Hanna, Shin, Ike, with Moulton combination discloses all elements as mentioned above in claim 15. Hanna, Shin, Ike, with Moulton combination does not disclose a light source that is a display portion which performs displaying on a screen; and wherein, when the shape, pattern, color, or combination thereof of the light source is updated to be changed, a shape, pattern, color, or combination thereof of a display drawn on the screen of the display portion is changed.

Aucsmith teaches a light source that is a display portion which performs displaying on a screen (see col. 4, lines 55-65 illumination source is a typically a computer monitor); and wherein, when the shape, pattern, color, or combination thereof of the light source is updated to be changed (figure 2, numeral 207), a shape, pattern, color, or combination thereof of a display drawn on the screen of the display portion is changed (see fig. 2, numeral 212; col. 1, lines 55-65 modulates an illumination source such as a PC display in a pseudo-random sequence to produce time-varying light emissions that reflect off of an object being imaged).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Hanna, Shin, Ike, with Moulton combination to utilize a display portion as a light source and alter the pattern as suggested by Aucsmith, in “making visual authentication less susceptible to replay attacks and spoofing” (col. 1, lines 42-45).

12. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hanna et al (US 6,714,665 B1), Shin (US 2004/0037452 A1), with Ike (US 2003/0108224 A1) as applied to claim 17 above, and further in view of Langley (US 6,970,582 B2).

Regarding **claim 18**, Hanna, Shin, with Ike combination discloses all elements as mentioned above in claim 17. Hanna, Shin, with Ike does not comprising a standard image data comparing means for comparing the current standard image data obtained by said current standard image obtaining means with the registration standard image data stored in said registration standard image data storing means.

Langley teaches comparing multiple biometric features (see col. 2, lines 17-33 verification by using multiple scanned biometric features by comparing the biometric data with reference biometric data recorded from the user during an enrollment procedure, to verify the identity of the user). The concept of utilizing and comparing multiple biometric features is equivalent to comparing the current standard image data along with the close-up with the respective registration image data.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Hanna, Shin, with Ike combination to utilize and compare multiple biometric features as suggested by Langley, to “[obtain] increased accuracy” (col. 2, lines 17-33) and reliability of the overall system.

Response to Arguments

13. Applicant’s arguments, see pg. 31-32, last, first paragraph respectively, filed 3/7/08, with respect to the rejection(s) of **claim(s) 10** under Hanna with Shin combination have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon

further consideration, a new ground(s) of rejection is made in view of Hanna, Shin with Ike. This new ground(s) of rejection is necessitated by the applicant's amendment of claim 10.

Applicant further argues that the Hanna with Shin combination does not disclose storing images in the image data storing means recited in claim 10. This argument is not considered persuasive since the Shin reference brings in the concept of storing images as registration image data in image data storing means which is applied to both the standard image data and the close-up image data. If the storing means is able to perform or meet both limitations of the claim then the limitations are met regardless if it is considered a first or second storing means or in this case, a close-up image data storing means or a standard image data storing means.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to combine Hanna with Shin and Ike is stated above in the rejection of claim 10.

Regarding **claims 17, 21**, applicant argues that the claims are allowable due the same reasons as presented above relative to claim 10. This argument is not considered persuasive since the rejection of claim 10 stands and the arguments and rejection can be seen above.

Regarding **claim 12**, applicant argues that Hanna discloses only a person as a subject in figure 6 rather than a person or an animal. Applicant admits in his arguments that the claim

limitation is met by the Hanna reference since the claim only calls for the limitation wherein the subject is a person or an animal. This argument is not considered persuasive since the applicant admits that the Hanna reference teaches the claim limitation. Furthermore, the applicant argues the claim is allowable due to the dependency from claim 10. This argument is not considered persuasive since claim 10 stands rejected and the arguments and rejection can be seen above.

Regarding **claims 19, 20**, applicant argues that the Hanna reference does not disclose the light source is configured to have a shape, pattern, color, or combination thereof. This argument is not considered persuasive since the Hanna reference does meet the limitation in col. 13, lines 12-28. Collectively light source 331 consists of light sources 124, 126, 128, 130, and 132 where the combination is considered a pattern and the light source can be controlled in terms of brightness which would change the pattern of light source in terms of brightness. Furthermore, in regards to claim 20, the applicant argues that the claim limitation, illumination by the light source keeps a constant brightness is not met and Hanna does not disclose any technique regarding brightness. This argument is not considered persuasive since the applicant's representative admits that Hanna teaches in col. 16, lines 5-18 that the illumination technique allows the heads and eyes of the persons being image to be uniformly illuminated, and that the light source may be used to provide a known level of illumination to the head portions of the images captured. Illumination and brightness are equivalent in terms of brightness is the luminous flux incident on a unit area.

Regarding **claim 11**, applicant argues that the Langley reference does not disclose the claim limitations of claim 11. This argument is not considered persuasive since Langley discloses the concept of comparing multiple biometric features which is the essence of claim 11

where a standard and close-up image data is compared to registration data to perform identification. Examiner notes to see the rejection of claim 11 above.

Regarding **claim 13**, applicant argues that the Hanna reference does not teach where the standard image is a hand or a foot image capturing a substantially entire hand or foot of the subject. The applicant points to figure 5 and states that it is not a substantially entire hand or foot of the subject. This argument is not considered persuasive since the rejection is based off of figure 6 and also, it is clearly shown that a hand is imaged of a person.

Regarding **claim 14**, applicant argues that the Moulton reference does not disclose the optical source noise combined into the registration close-up image data. This argument is not considered persuasive since the Moulton reference discloses combining optical noise with storing means since the claim is interpreted as the noise is stored in the storing means which happens to have the registration close-up image which would make the two elements combined within the storing means.

Regarding **claim 15**, applicant argues that Hanna does not disclose that the light source is configured to have a shape, pattern, color, or combination thereof. This argument is not considered persuasive since the Hanna reference does meet the limitation in col. 13, lines 12-28. Collectively light source 331 consists of light sources 124, 126, 128, 130, and 132 where the combination is considered a pattern and the light source can be controlled in terms of brightness which would change the pattern of light source in terms of brightness.

Regarding **claim 16**, applicant argues that Aucsmith does not disclose a shape, pattern, or color of a display drawn on the screen of the display portion is changed to update. This

argument is not considered persuasive since the Aucsmith reference discloses the claim limitations and the rejection can be seen above.

Regarding **claim 18**, applicant argues that the Langley reference does not disclose the claim limitations of claim 18. This argument is not considered persuasive since Langley discloses the concept of comparing multiple biometric features which is the essence of claim 11 where a standard and close-up image data is compared to registration data to perform identification. Examiner notes to see the rejection of claim 11 above.

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDWARD PARK whose telephone number is (571)270-1576. The examiner can normally be reached on M-F 10:30 - 20:00, (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on (571) 272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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